

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/BE2005/000010

International filing date (day/month/year)  
26.01.2005

Priority date (day/month/year)  
24.02.2004

International Patent Classification (IPC) or both national classification and IPC  
G01C22/00, G01C21/16

Applicant  
VERHAERT NEW-PRODUCTS & SERVICES, N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Box No. I    Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
  
☐ a sequence listing  
  
☐ table(s) related to the sequence listing
  - b. format of material:  
  
☐ in written format  
  
☐ in computer readable form
  - c. time of filing/furnishing:  
  
☐ contained in the international application as filed.  
  
☐ filed together with the international application in computer readable form.  
  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	3, 5, 10
	No: Claims	1, 2, 4, 6-9, 11-14
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/BE2005/000010

**Re Item V.**

- 1 Reference is made to the following documents:  
D1 : US 6 305 221 B1 (HUTCHINGS LAWRENCE J) 23 October 2001 (2001-10-23)  
D2 : US 6 366 855 B1 (REILLY RICHARD H ET AL) 2 April 2002 (2002-04-02)

**2 NOVELTY**

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.  
Document D1 discloses (the references in parentheses applying to this document):  
a device to determine the road followed by a person on foot (col. 16, lines 33-37 & fig. 1), the device having a plurality of inertia sensors attached to various parts of the body of the person (col. 26, lines 4-15 & col. 23, lines 33-37), which measure the absolute orientation of a particular part of the body (col. 26, lines 6-7), means to determine the instant at which a person takes a step (col. 8, lines 3-5), an arithmetic unit with which the sensors and above-mentioned means are connected (col. 23, lines 53-55), the arithmetic unit determines the step distance (col. 23, lines 58-60) for every step as well as the cumulated step distance from a starting point (col. 24, lines 61-65).

Hence, all the features are known from D1.

- 2.2 All the features of claim 1 are also known from D2. See the passages mentioned in the search report.
- 2.3 The subject-matter of claims 2, 4, 6-9, 11-14 is also not new. The technical features of these claims can all be found in the search report cited passages of D1.

**3 INVENTIVE STEP**

- 3.1 Dependent claims 3, 5 and 10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

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Claims 3 and 5 relate to slight constructional changes which although not specifically mentioned are implicitly disclosed in D1. The Kalman filter in claim 10 is not specifically disclosed in D1 (col. 23, lines 43-48); however it is standard practice for the skilled person to use such a filter (see D2, col. 4, lines 65-67 for example).

**4. INDUSTRIAL APPLICABILITY**

The subject-matter of claims 1-14 are deemed to be industrially applicable in the field of pedestrian navigation.

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